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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 626,550	07 27 2000	David C. McClure	28940-55USPI	9694

7590

03 17 2003

Lisa K Jorgenson Esq  
STMicroelectronics Inc  
1310 Electronics Drive  
Carrollton, TX 75006-5039

EXAMINER

RIOS CUEVAS, ROBERTO JOSE

ART UNIT

PAPER NUMBER

2836

DATE MAILED: 03/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/626,550

Applicant(s)

MCCLURE ET AL.

Examiner

Roberto J Rios

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 30-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 9-13 and 16-29 is/are rejected.
- 7) ☐ Claim(s) 1-8, 14 and 15 is/are objected to.
- 8) ☒ Claim(s) 30-32 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-29, drawn to switching systems responsive to an electrical condition, classified in class 307, subclass 125.
  - II. Claims 30-32, drawn to indication systems responsive to an undervoltage condition, classified in class 340, subclass 663.
2. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the particulars of the switchover circuits are not claimed. The subcombination has separate utility such as a fault indicating system.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Gary Solomon on 11/20/2002 a provisional election was made without traverse to prosecute the invention of group I, claims 1-29. Affirmation of this election must be made by applicant along with cancellation of non-elected claims in replying to this Office action. Claims 30-32 are withdrawn from further

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consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Claim Objections***

6. Claims 1, 5 and 21 are objected under 37 CFR 1.75 (d)(1).

As per claim 1, it is not clear how the secondary power source is coupled to a second input of the power source switchover circuit. The specification recites power source switchover circuit having one input coupled to an external voltage  $V_{cext}$  and a second input coupled to a substrate voltage  $V_{ccsub}$ . Moreover, Figures 1 and 2, clearly show power source switchover circuit (103) receiving  $V_{cext}$  and  $V_{ccsub}$ . However, the specification discloses that when the power source switchover circuit is powered on the secondary power source, the substrate is at the secondary power source voltage level (page 18, line15). For prior art rejection purposes this is construed as the voltage  $V_{ccsub}$  being electrically coupled to the second input of said power switchover circuit. It is important to note that this is not the same as the secondary power source being electrically coupled to the second input of the power source switchover circuit. In addition, the claim recites on page 42, line 11 "the switchover logic circuit". It is believed the limitation should recite "the switchover circuit".

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Claim 5 recites "the first predefined threshold level". It is believed the limitation should recite "the predefined threshold level".

Claim 21 recites "the power source switchover circuit". There is a lack of antecedent basis for this limitation. Moreover, it is not clear if there is a plurality of switching circuits or if the claim refers to the same switching circuit recited in claim 16. The Examiner was unable to find a second switching circuit in the Figures. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 9-11, 16-18, 20-22, 24, and 26-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Townsend et al (US patent 4,713,553).

As per claim 9, Townsend et al (herein after Townsend) teach a method for performing a power source switchover from a primary power source to a secondary power source, the method comprising the steps of: detecting that a supply level being received from the primary power source decreases below a predefined threshold level from a steady-state operating level, the supply level transitioning faster than a predetermined negative rate of change (claim 12); asserting a signal indicating to switch from the primary power source to the secondary power source upon detecting that the supply level being delivered from the primary power source has decreased below the

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predefined threshold level (claim 8); detecting the signal indicating to switch from the primary power source to the secondary power source; and switching from the primary power source to the secondary power source based upon detecting the signal indicating to force a power source switchover (claim 13).

As per claim 10, Townsend teaches the primary power source being an external power source (AC input).

As per claim 11, Townsend teaches the secondary power source being a battery (206).

As per claim 16, Townsend teaches a circuit comprising: a first detection circuit for detecting a supply level decrease of a power level from a primary power source, the supply level transitioning from a steady-state supply level to a predefined threshold level faster than a predetermined negative rate of change (claim 12), the first circuit generating at least one signal in response to the supply level decreasing to the predefined threshold level; and a first switching circuit for switching from the primary power source to a secondary power source in response to the at least one signal (claim 13).

As per claim 17, Townsend teaches the primary power source being an external power source (AC input).

As per claim 18, Townsend teaches the secondary power source being a battery (206).

As per claim 20, Townsend teaches circuitry for adjusting a response time for the first detection circuit (col. 7, line 47).

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As per claim 21, Townsend teaches a second detection circuit for detecting a voltage threshold of a power source switchover circuit and the supply level being received from the primary power source (col. 5, line 45), the second detection circuit producing a plurality of signals based upon the detecting; said switching circuit for switching from the primary power source to the secondary power source in response to the plurality of signals based upon the detecting (col. 6, line 8).

As per claim 22, Townsend teaches circuitry for selectively responding to the first and the second detection circuits (col. 6, line 8).

As per claim 24, Townsend teaches a system comprising: a volatile device for maintaining data, the volatile device receiving power delivered from a primary power source (col. 1, line 8); a forced power source switchover circuit for detecting a transition in a supply level from a primary power source, the forced power source switchover circuit reactive to the supply level of the primary power source transitioning from a steady-state operating level to a predefined threshold level, the supply level transitioning at a rate faster than a predetermined negative rate of change (claim 12); and a switchover circuit coupled to the forced power source switchover circuit and the volatile device for asserting a switch from the primary power source to a secondary power source to prevent the volatile device from losing data upon power being removed from the volatile device (claim 13).

As per claim 26, Townsend teaches the forced power switchover circuit providing an indication to the switchover circuit approximately at the instant of the primary power source crossing the predefined threshold level (claim 8).

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As per claim 27, Townsend teaches a power source switchover circuit connected to the switchover circuit, the power source switchover circuit detecting that the power being delivered from the primary power source transitioning below a trip point, the transitioning occurring at a rate slower than the predetermined negative rate of change.

As per claims 28 and 29, Townsend teaches the system including a memory device (col. 1, line 8).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 12, 13, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Townsend.

As per claims 12, 13, 19, Townsend teaches providing a predefined threshold voltage and a negative rate of change threshold but does not specifically the predefined threshold voltage being below 2.5 volts and a negative rate of change being 150 microseconds. However, the Examiner takes official notice that it is well known in the art to selectively defined threshold levels based generally on the power source capacity and the load characteristics.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Townsend such that the predefined



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threshold voltage is below 2.5 volts and a negative rate of change is 150 microseconds for the purpose of adapting thresholds levels to a particular system.

11. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Townsend in view of Johnson (US patent 4,087,697).

As per claim 23, Townsend teaches a switchover circuit to switchover from a primary source to a secondary source but does not specifically disclose providing an input terminal to selectively disable a switchover operation. However, Johnson teaches a rapid power transfer system, wherein an input terminal is provided to selectively disable a switchover operation from a primary source to a secondary source (col. 3, line 30).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Townsend with the teachings of Johnson such that an input terminal selectively disable a switchover operation for the purpose of providing external means to control switchover operation such as manual cutoff switch.

***Allowable Subject Matter***

12. Claims 1-8 are allowed over the prior art of record. However, it is important to note that claims 1 and 5 have been objected.

13. Claims 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

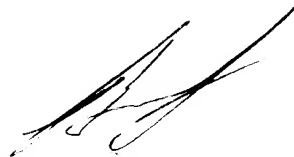
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14. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to teach or fairly suggest a power source switchover comprising a first input electrically coupled to a first power source and a second input electrically coupled to a voltage potential of a substrate as in the claimed combination of elements recited in claim 1, wherein a compare signal is provided indicative of a relationship between said first power source and said substrate voltage potential as in the claimed combination of elements recited in claim 14.

15. Art of general nature relating to UPS systems has been cited for applicant's review.

#### **Communication with PTO**

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rios whose telephone number is (703) 306-5518. In the event that Examiner Rios cannot be reached, his supervisor, Brian Sircus may be contacted at (703) 308-3119. The fax number for Before-Final communications is (703) 872-9318, for After-Final communications is (703) 872-9319, and for Customer Service is (703) 872-9317.



Roberto J. Rios  
Patent Examiner